

DESTRUCTIVE WEATHER MANUAL

APPENDIX I

INDIVIDUAL ACTIONS

1. Common Destructive Storm Actions

a. Before the Storm:

- Prepare family plans.
- Know diagram of immediate area.
- Know location of emergency services.
- Stay informed. Use local radio or television stations and Marine Corps Base TV station.
- Ensure vehicle maintenance and vehicle has a full tank of gas.
- Check supplies of special medicines and drugs.
- Check batteries in radios and flashlights.
- Practice using safety routes.
- Plan for the care of pets if departing the area or if going to a shelter (pets are not allowed in shelters).
- Fill containers or bathtub with several days supply of drinking water. Recommended amount for drinking and sanitation is 3 gallons per person per day.
- Familiarize yourself and post a listing on how to turn off utilities.
- Know the warning signals used in your community for the different destructive weather conditions.
- Stock up on food. The most useful foods are those that require minimum preparation and do not require refrigeration, such as canned foods.

DESTRUCTIVE WEATHER MANUAL

- Consider setting up a neighborhood information program. Hold briefings on safety procedures for destructive weather. Set up a system to make sure senior citizens and shut-ins are alerted if there is a destructive weather warning.
- Put together an emergency storm kit including a transistor radio, flashlight, batteries, and simple first-aid items in a waterproof container.
- Ensure that you have proper insurance coverage, i.e., Renters or Homeowners.
- Make a complete inventory and/or video tape of your possessions for insurance purposes. Keep that list in a bank safe deposit box or other safe place away from your home.
- Consider sending copies of important papers to a relative.
- Conduct drills with your family in the home; make sure each member is familiar with correct procedures regardless of location, in the event of an emergency.

b. During the Storm:

- Use the telephone for emergencies only.
- Keep calm and remain alert.
- Remain indoors and away from windows.
- Keep busy and entertained (i.e., card/board games, etc.).
- Maintain accurate account of food and water provisions.
- Turn up refrigerator to maximum cold and don't open unless necessary.
- Stay informed through local radio or television stations. Keep a portable radio close by with extra batteries.

DESTRUCTIVE WEATHER MANUAL

- Attempt to prevent children from becoming bored. Keep marbles, jacks, wood blocks, coloring books and crayons, and a deck of cards tucked into a bag in the cabinet or pantry.

c. After the Storm:

- Watch out for downed power lines when you go outside.
- Watch out for dangerous poisonous snakes and wild animals driven to high ground when you go outside.
- Use caution when re-entering your home.
- Inspect home for structural damage and gas leaks.
- Check food and water for spoilage.
- Keep alert for signs of flooding
- Open windows and doors to let air circulate.
- Stay informed through local radio or television stations.
- Do not strike a match or use a flame when entering the structure. Escaping gas may cause an explosion.
- Throw away perishable foods; they may be contaminated from exposure.
- If necessary, notify appropriate agencies for re-establishment of essential services.
- Notify your insurance agent and provide as much detail as possible about damage to your property.
- Notify emergency personnel of any local hazards (e.g., downed power lines, hazardous material (HAZMAT) spills, roadway washouts, etc.).
- Take steps to protect your home and furniture from further damage. Attempt to clean and dry your furniture, bedding, rugs, and carpeting as soon as possible.

DESTRUCTIVE WEATHER MANUAL

- Maintain receipts for additional living expenses (such as temporary quarters) and for repair for insurance reimbursement.
- Check people around you for injuries. Begin first aid or seek help if necessary. Always cooperate with local law enforcement and emergency service officials.
- Do not be rushed into signing repair contracts. Deal with reputable contractors. If you're unsure about a contractor's credentials perhaps your agent, claim adjuster, Better Business Bureau, or Chamber of Commerce can assist. Ensure the contractor you hire is experienced in repair work, as well as new construction. Request clear, written payment terms and consult your lawyer, agent, or adjuster before signing any contracts. Pay only after services are complete.
- Check utility lines and appliances for damage. If you smell gas, open the windows and turn off the main valve. Don't turn on lights or appliances until the gas has dissipated. If electric wires are shorting out, turn off the power.
- Beware of electrical wires. Ensure electrical current is turned off, and do not attempt to operate any electrically-operated light or appliance until an electrician has certified the system.

2. Destructive Wind Actions

a. Before Destructive Winds:

- Remove all loose debris from surrounding area.
- Empty and secure trash containers.
- Secure all windows.
- Prepare for loss or disruption of essential utilities.
- Ensure vehicle doors are locked and windows closed.
- Board or shutter windows to mitigate shattering.
- Board up garage and porch doors.

DESTRUCTIVE WEATHER MANUAL

- Wedge sliding glass doors to prevent their lifting from their tracks.

b. During Destructive Winds: Stay indoors and away from windows.

- Keep simple tools and equipment available that ^{may} be needed to fight a fire, should the help of your local fire department not be available. *ch. 1*

c. After Destructive Winds. Ensure appropriate "After the Storm" procedures are conducted as directed in Common Destructive Weather Actions.

3. Flooding Actions

a. Before Flooding:

(1) General

- Investigate your area's flood risk.
- Purchase homeowner insurance. Determine if you are covered by Federal flood insurance.
- Learn the safest route from your home or place of business to high, safe ground should a flood occur.
- If possible, move valuables to upper floors. Otherwise, utilize attic spaces and available spaces overhead.
- Conduct appropriate "Before the Storm" precautions as directed in Common Destructive Storm Actions.

(2) If A Flood Watch Is Issued. Conduct appropriate "Before the Storm" precautions as directed in Common Destructive Storm Actions.

(3) If A Flood Warning Is Issued. Keep alert for signs of flash flooding, such as intense rainfall or rising waters. If you suspect flooding has started, go to safety immediately!

DESTRUCTIVE WEATHER MANUAL

b. During Flooding:

(1) General

- Stay away from storm drains and irrigation ditches.
- Be exceedingly cautious if you have to evacuate in your car at night. In the dark, you can't see the flood dangers.
- Be aware that floods are deceptive. Avoid flooded areas. Do not attempt to cross any stretch of flood waters on foot if the water is above your knees.
- Know that in floods cars can become coffins. DO NOT DRIVE WHERE WATER IS OVER ROADS. If your vehicle stalls in rapidly rising waters, abandon it immediately and climb to higher ground.
- If you are caught in the house by suddenly rising flood waters, move to the second floor and/or, if necessary, to the roof. Take warm clothing and a flashlight with you, as well as your battery-powered radio. Don't try to swim to safety. Wait for help.
- Ensure appropriate "During the Storm" procedures are conducted as directed in Common Destructive Weather Actions.

(2) If Time Permits:

- Turn off all utilities at the main switch. Do not touch any electrical equipment unless it is in a dry area or you are standing on a piece of dry wood with rubber footwear and gloves on.
- Open basement windows to equalize water pressure on the foundations and walls.

(3) After Flooding:

- Call your insurance agent or broker concerning your flood insurance policy after the flood has subsided and you are out of harms' way.

DESTRUCTIVE WEATHER MANUAL

- Pump out your basement if flooded, but gradually. Drain one-third of the flood waters each day. This will minimize further structure damage. Remove mud while still moist. Dry rugs and carpets thoroughly.
- Ensure appropriate "After the Storm" procedures are conducted as directed in Common Destructive Weather Actions.

4. Lightning Actions

a. During Lightning. If lightning is imminent, exercise the following safety precautions:

- Don't use metal objects like fishing rods, golf clubs, and radio antennae.
- Get out of the water and off small boats.
- Stay in your automobile if you are traveling.
- Use the telephone for emergencies only.
- Stay indoors, and don't venture outside, unless absolutely necessary.
- Don't work on fences, telephone or power lines, pipelines, or structural steel fabrication.
- Seek shelter in buildings. If no buildings are available, your best protection is a cave or ditch.
- Stay away from open doors and windows, fireplaces, radiators, stoves, metal pipes, sinks, and plug-in electrical appliances.
- Don't use plug-in electrical equipment like hair dryers, electric tooth brushes, or electric razors during the storm.
- When no shelter is available, avoid the highest object in the area. If only isolated trees are nearby, your best protection is to crouch in the open, keeping twice as far away from the highest isolated trees. Avoid hilltops, open spaces, wire fences, metal clothes lines,

DESTRUCTIVE WEATHER MANUAL

- exposed sheds, and any electrically conductive elevated objects.

b. After Lightning. Conduct "After the Storm" procedures as directed in Common Destructive Storm Actions.

5. Thunderstorm Actions

a. Before Thunderstorms. Conduct "Before the Storm" precautions as previously directed in Common Destructive Storm, Destructive Winds, and Flooding actions.

b. During Thunderstorms:

- Remain indoors. If you must travel, stay informed through local radio stations. Remain alert for downed power lines, trees, debris in roadways, flooded areas, sidewalks, and other impediments that will obstruct traffic flow.

- Ensure "During the Storm" procedures are conducted as previously directed in Common Destructive Weather, Destructive Winds, Flooding, and Lightning actions.

c. After Thunderstorms. Conduct "After the Storm" procedures as previously directed in Common Destructive Storm, Destructive Winds, Flooding, and Lightning actions.

6. Tornado Actions

a. Before Tornadoes:

- Move cars inside a garage if possible to avoid damage from hail that often accompanies tornadoes. Keep your car and house keys with you.
- Conduct "Before the Storm" precautions as previously directed in Common Destructive Storm and Destructive Winds Actions.

b. During Tornadoes. When a tornado warning is issued, seek shelter immediately!

- At Home. Seek shelter in the basement under something sturdy, like a bench. If there is no basement, a small room in the middle of the house (a closet or bathroom) is best. Always stay away from outside walls and windows.

DESTRUCTIVE WEATHER MANUAL

- At Work or School. Designated shelter areas are best. Stay away from large open rooms like auditoriums and gymnasiums, and rooms with windows. Lie low with your hands covering the back of your head to reduce neck injury.
- In Shopping Malls. Go to a designated shelter area or to the center of the building on a low level. Stay away from large, open rooms and windows. Never seek shelter in cars in the parking lot.
- In Mobile Homes or Cars. Leave the vehicle. Seek a safe structure or lie down in a low area with your hands covering the back of your head and neck. Keep alert for flash floods that often accompany such storms.
- Conduct "During the Storm" procedures as previously directed in Common Destructive Storm and Destructive Winds Actions.

c. After Tornadoes. Conduct "After the Storm" procedures as previously directed in Common Destructive Storm, Destructive Winds, and Flooding Actions.

7. Winter Storms

a. Before Winter Storms:

- Keep an adequate supply of heating fuel on hand.
- Make sure your car is in good condition, properly serviced, and equipped with chains or snow tires.
- Have emergency winter storm supplies in the car, such as a container of sand, shovel, windshield scraper, flares, booster cables, tow-line or rope, and a flashlight. It is also good to have with you a warm blanket, heavy gloves or mittens, overshoes, extra woolen socks, and winter headgear to cover your head and face.
- Conduct "Before the Storm" precautions as previously directed in Common Destructive Storm and Destructive Winds Actions.

b. During Winter Storms:

- If utilizing heating fuel, use it sparingly.

DESTRUCTIVE WEATHER MANUAL

- If necessary, conserve fuel by keeping the house cooler than usual, or by "closing off" some rooms temporarily.

- Have available some kind of emergency heating equipment and fuel so you can keep at least one room of your house warm enough to be livable, should a power failure occur. Examples of emergency heating equipment are camp stoves, kerosene heaters, or a supply of wood if you have a fireplace. Keep in mind that there is a danger of a house-fire if you do not use emergency equipment properly.

c. If You Must Travel:

- Travel by daylight using major highways. Drive with all possible caution.

- Don't be daring or foolhardy.

- Take another person. If you must travel alone, ensure someone knows your travel route.

- Keep the car radio turned on for weather information and other emergency advice.

- Stay indoors unless in peak physical condition. If you must venture outside, avoid overexertion.

- Dress to fit the weather. Cover your mouth to protect your lungs from extremely cold air. Thin layers of loose-fitting clothing trap body heat while permitting air to circulate. Layers can be removed to prevent perspiring and subsequent chill. Outer clothing should be tightly woven, water repellent, and hooded. Mittens, snug at the wrists, are better than fingered gloves.

- KEEP CALM IF YOU GET IN TROUBLE: If your car breaks down during a storm, or if you become stalled or lost, don't panic. If you become trapped on the road, pull off the highway, set your directional lights to flashing, raise the hood of your car, or hang a cloth from the radio aerial or a car window. Don't try to walk through a blizzard to safety. Getting lost may mean injury or death. Don't waste gas by running the engine continuously. Beware of the danger of carbon monoxide poisoning. Open a window for ventilation and periodically clear away snow from the exhaust pipe.

DESTRUCTIVE WEATHER MANUAL

Exercise to maintain body heat. Move your arms and legs vigorously and move around within the car. Never let everyone in the car sleep at one time. At night turn the dome light on if flashers are blocked, so work crews may spot you.

- Conduct "During the Storm" procedures as previously directed in Common Destructive Storm and Destructive Winds Actions.

d. After Winter Storms. Conduct "After the Storm" procedures as previously directed in Common Destructive Weather and Destructive Winds Actions.

8. Hurricanes

a. When a Hurricane Watch is Issued for Your Area:

- Check mobile home tie-downs.
- Check often for official bulletins on radio, TV, or NOAA (National Oceanic and Atmospheric Association) Weather Radio.

b. When a Hurricane Warning is Issued for Your Area:

- Stay home if sturdy and on high ground. Take the appropriate precautions.
- Leave mobile homes, move inland to hotels, relatives, friends, or shelters.
- Leave areas which might be affected by storm tide or stream flooding:
- Leave early, in daylight if possible.
- Lock up house.
- Shut off water and electricity at main stations.
- Take small valuables and papers but travel light.
- Leave food and water for pets (shelters will not take them).

DESTRUCTIVE WEATHER MANUAL

- Drive carefully to nearest designated shelter using recommended evacuation routes.

c. Before the Hurricane. Conduct "Before the Storm" precautions as previously directed in Common Destructive Storm, Destructive Winds, Flooding, and Lightning Actions.

d. During the Hurricane. Conduct "During the Storm" procedures as previously directed in Common Destructive Storm, Destructive Winds, Flooding, and Lightning Actions.

e. After the Hurricane. Conduct "After the Storm" procedures as previously directed in Common Destructive Storm, Destructive Winds, Flooding, and Lightning Actions.

DESTRUCTIVE WEATHER MANUAL

TAB A

DISASTER SUPPLIES KIT

1. There are 6 basics you should stock in your home as a preparation for any type of disaster: water, food, first aid supplies, clothing and bedding, tools and emergency supplies, and special items.

- Keep this kit in a convenient, dry location known to all family members. Assemble a smaller version and put it in the trunk of your car. Keep items in an easy to carry air tight bag or container.
- Change your stored water every 6 months so it stays fresh.
- Rotate your stored food every 6 months.
- Re-think your kit and family needs at least once a year. Replace batteries, update clothes, etc.
- Ask your physician or pharmacist about storing over the counter and prescription medication. Take appropriate action to ensure an on hand supply in the kit.

a. WATER

(1) Store water in plastic containers such as soft drink bottles. Avoid using containers that will decompose or break, such as milk cartons or glass bottles. Avoid metal containers because they have a tendency to rust or leave a residual taste to the water.

(2) Purify water, if necessary, using the water purification techniques located in TAB C.

b. FOOD. Store at least a three day supply of non-perishable food. Select foods that require no refrigeration, preparation or cooking and little or no water. If you must heat food, pack a sterno stove. Select food items that are light weight. Plan for eating at least one square meal a day. Make high protein/calorie food choices. Keep your kit in the driest, coolest place in your home. Be sure to tightly close all opened containers when opened for emergency use. Never open an item for regular domestic use and not replace it with a new product.

DESTRUCTIVE WEATHER MANUAL

c. OTHER BASICS. See the below chart for basic first aid supplies, tools and emergency supplies, and special items to include in your Disaster Supplies Kit.

2. Other items to stock in your Disaster Supplies Kit include; hygiene items, entertainment items, and important family documents.

3. The following selection should be considered for your Disaster Supplies Kit:

Water	<ul style="list-style-type: none">-2 quarts drinking water each day-2 quarts for hygiene and food preparation-Store a minimum of 1 gallon of fresh water per person per day.-3 days supply per person on hand
Food	<ul style="list-style-type: none">-Ready-to-Eat canned meats, jerky, fruits and vegetables-Canned juices, milk, soup (store extra water as required)-Staple items (i.e. sugar, salt, pepper)-High energy foods (i.e. peanut butter, jelly, crackers, granola bars and trail mix)-Vitamins-Food for infants, elderly or persons on special diets-Comfort/Stress foods (i.e. cookies, hard candy, sweetened cereal, instant coffee, tea)
Bedding	<ul style="list-style-type: none">-Sleeping bags-Blankets (military wool are durable and warm)

DESTRUCTIVE WEATHER MANUAL

Clothing	<ul style="list-style-type: none"> -At least one complete change of clothing and footwear per person. -Boots or sturdy shoes -Rain Gear -Hat(s) and Gloves (work and leisure) -Underwear (thermal also) -Sunglasses
First Aid Items	<ul style="list-style-type: none"> -Sterile adhesive bandages in assorted sizes -2" sterile gauze pads (4-6) -4" sterile gauze pads (4-6) -Hypoallergenic adhesive tape -Triangular bandages (3) -2" sterile roller bandages (3 rolls) -3" sterile roller bandages (3 rolls) -Scissors -Tweezers -Assortment of needles and safety pins -Antiseptic -Thermometer -Tongue blades (2) -Tube of petroleum jelly or other lubricant -Cleansing agent/soap -Latex gloves (2 pair) -Sunscreen and insect repellent -Iodine (2% USD pharmacodie tincture of iodine)/Iodine tablets

DESTRUCTIVE WEATHER MANUAL

Non-prescription drugs	<ul style="list-style-type: none"> -Aspirin or non-aspirin pain reliever -Anti-diarrhea medication -Antacid -Syrup of Ipecac and activated charcoal (used to induce vomiting in case of poisoning) -Laxative -Eye wash
Tools and Supplies (Cont)	<ul style="list-style-type: none"> -Tape (masking, electrical, duct) -Compass -Matches/lighter (in water proof container) -Aluminum foil -Signal flare -Paper, pen, pencil -Needles and thread -Medicine dropper -Shut-off wrench for water main and one for gas -Whistle -Plastic sheeting -Map of the area (with predesignated shelter locations) -Large freezer bags
Special Items (for Baby)	<ul style="list-style-type: none"> -Formula -Diapers -Bottles -Powdered milk -Medications

DESTRUCTIVE WEATHER MANUAL

Special Items (for Adults)	<ul style="list-style-type: none"> -Heart and high blood pressure medications -Insulin -Prescription drugs-Denture needs -Contact lenses and supplies -Extra eye glasses
Hygiene	<ul style="list-style-type: none"> -Toilet paper, towelettes -Soap, liquid detergent -Feminine supplies -Personal hygiene items (tooth brush/paste, shaving cream, deodorant, razors, etc.) -Plastic garbage bags and ties (for personal sanitation use) - Plastic bucket with tight lid - Disinfectant - Household chlorine bleach
Entertainment	-Books, magazines, games, etc.
Important Family Documents	<ul style="list-style-type: none"> -Wills, insurance policies, contracts, deeds, stocks, and bonds -Passports, social security cards, immunization records -Important telephone numbers and addresses -Bank account numbers -Credit card account numbers with associated card companies and customer service phone numbers -Inventory of personal property items -Family records (i.e. birth, marriage, death certificates)

DESTRUCTIVE WEATHER MANUAL

TAB B

DISASTER EQUIPMENT LIST

ITEM	QUANTITY
First Aid Kit	1
Battlelamp	2
Screwdriver	3
Pliers	2
Handsaw	1
Sledge Hammer	1
Nails (size #6)	5 lbs
Nails (size #8 common)	5 lbs
Rope	100 ft.
Claw Hammer	1
Crowbar (size 16')	1
Hand Axe	1
Pick	1
Shovel, long handle	1
Lantern, w/mantles and fuel	4
Flashlight, w/batteries	4
Lumber (shoring or window covering)	3 - sheets plywood 8 - 2X4 8 - #3

DESTRUCTIVE WEATHER MANUAL

TAB C

WATER PURIFICATION TECHNIQUES

Remember you can live longer without food than you can without water. There are 2 primary means for disinfecting or purifying small quantities of water for consumption.

1. Boiling. 10 minutes of boiling will kill any disease causing bacteria present. The flat taste of the boiled water can be improved by pouring it back and forth from one container to another, by allowing the water to stand for several hours, or by adding a pinch of salt to each quart of water boiled.

2. Chemicals

a. Chlorine. Common household bleach can be used to chlorinate water prior to consumption. Check for label instructions first. If no instructions are provided, identify the chlorine content of the bleach. This information should be printed on the label. You must know the chlorine content of the bleach. Adding improper amounts of chlorine could result in serious injury or death! If the chlorine content is:

(1) **1%** - use 10 drops of bleach per quart of water to be disinfected.

(2) **4-6%** - use 2 drops of bleach per quart of water to be disinfected (*most commercial household bleach is 5.25% chlorine*).

(3) **7-10%** - use 1 drop of bleach per quart of water to be disinfected.

Mix the water and the bleach thoroughly. Let it stand for 30 minutes. If the water does not have a slight chlorine odor, repeat the dosage and allow it to stand another 15 minutes. Water disinfected by this method should have a slight chlorine smell. The treated water may taste better if it is allowed to stand several hours or is poured back and forth between two containers several times after the 30 minute minimum has elapsed.

b. Iodine. Follow label directions. If no label directions are available and the solution is 2% USP (pharmacodie) tincture of iodine, add five drops to each quart of clear water to be purified. Mix thoroughly and let stand for 30 minutes before using. Another way to treat water with iodine is to use iodine

DESTRUCTIVE WEATHER MANUAL

tablets. Follow label directions but if none are available, use one tablet for each quart of water. Mix thoroughly and ensure the tablet is completely dissolved. Let the water stand for 30 minutes before using.

APPENDIX J

HURRICANE TRACKING CHART

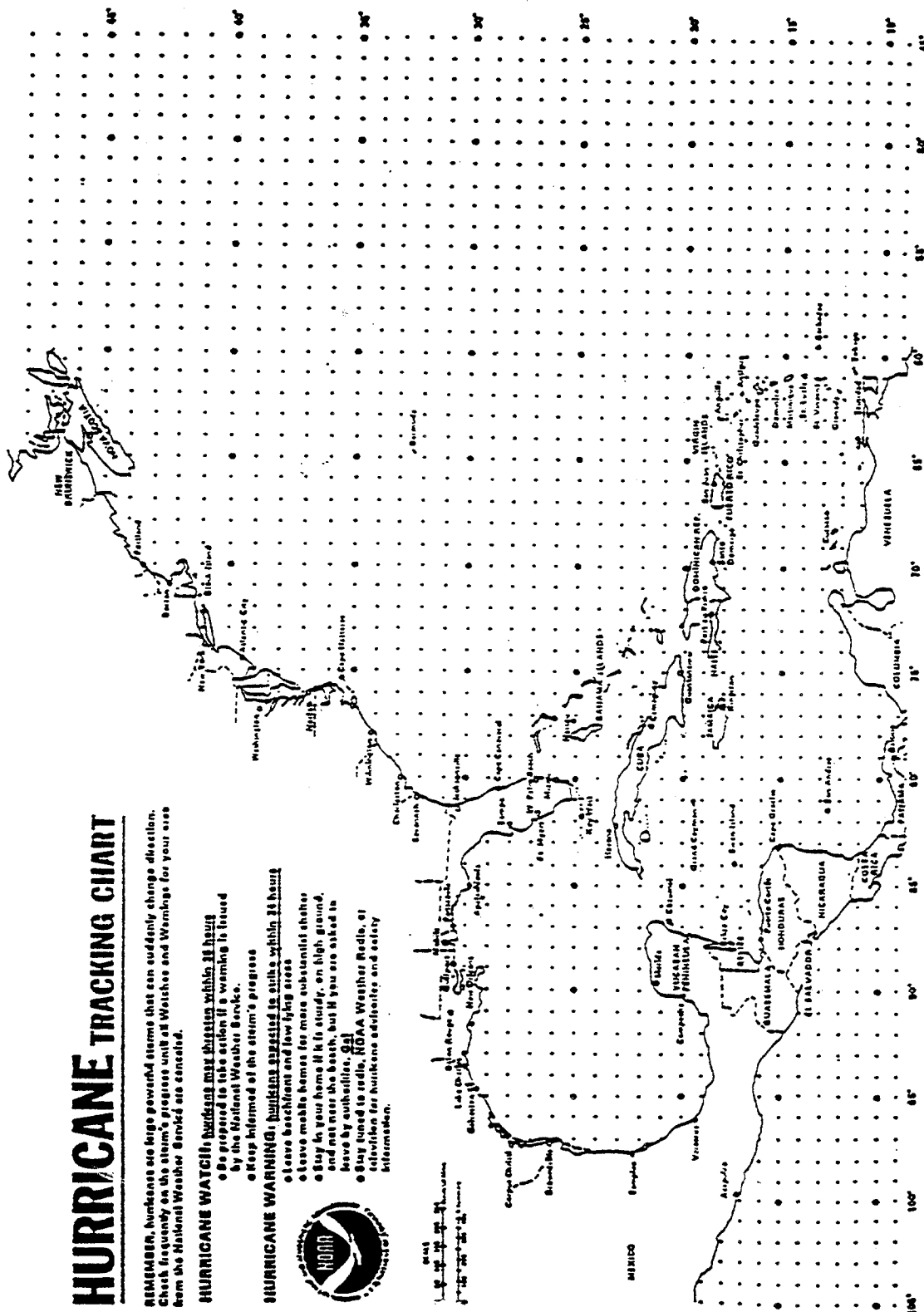
HURRICANE TRACKING CHART

REMEMBER, hurricanes are large powerful storms that can suddenly change direction. Check frequently on the storm's progress with all Watches and Warnings for your area from the National Weather Service are cancelled.

HURRICANE WATCH: Hurricane may threaten within 36 hours. Be prepared to take action if a warning is issued by the National Weather Service.

HURRICANE WARNING: Hurricane expected to strike within 24 hours. Leave homes and low-lying areas.

- Leave mobile homes for more substantial shelter.
- Stay in your home if it is sturdy, on high ground, and not near the beach, but if you are asked to leave by authorities, go!
- Stay tuned to radio, NOAA Weather Radio, or television for hurricane advisories and safety information.



DESTRUCTIVE WEATHER MANUAL

APPENDIX K

KNOTS TO MPH CONVERSION TABLE

KNOTS	MPH	KNOTS	MPH	KNOTS	MPH	KNOTS	MPH	KNOTS	MPH
1	1.15	31	35.65	61	70.15	91	104.65	120	138
2	2.3	32	36.8	62	71.3	92	105.8	121	139.15
3	3.45	33	37.95	63	72.45	93	106.95	122	140.35
4	4.6	34	39.1	64	73.6	94	108.1	123	141.45
5	5.75	35	40.25	65	74.75	95	109.25	124	142.65
6	6.9	36	41.4	66	75.9	96	110.4	125	143.75
7	8.05	37	42.55	67	77.05	97	111.55	126	144.95
8	9.2	38	43.7	68	78.2	98	112.7	127	146.05
9	10.35	39	44.85	69	79.35	99	113.85	128	147.25
10	11.5	40	46	70	80.5	100	115	129	148.35
11	12.65	41	47.15	71	81.65	101	116.15	130	149.55
12	13.8	42	48.3	72	82.8	102	117.3	131	150.65
13	14.95	43	49.45	73	83.95	103	118.45	132	151.85
14	16.1	44	50.6	74	85.1	104	119.6	133	152.95
15	17.25	45	51.75	75	86.25	105	120.75	134	154.15
16	18.4	46	52.9	76	87.4	106	121.9	135	155.25
17	19.55	47	54.05	77	88.55	107	123.05	136	156.45
18	20.7	48	55.2	78	89.7	108	124.2	137	157.55
19	21.85	49	56.35	79	90.85	109	125.35	138	158.75
20	23	50	57.5	80	92	110	126.5	139	159.85

DESTRUCTIVE WEATHER MANUAL

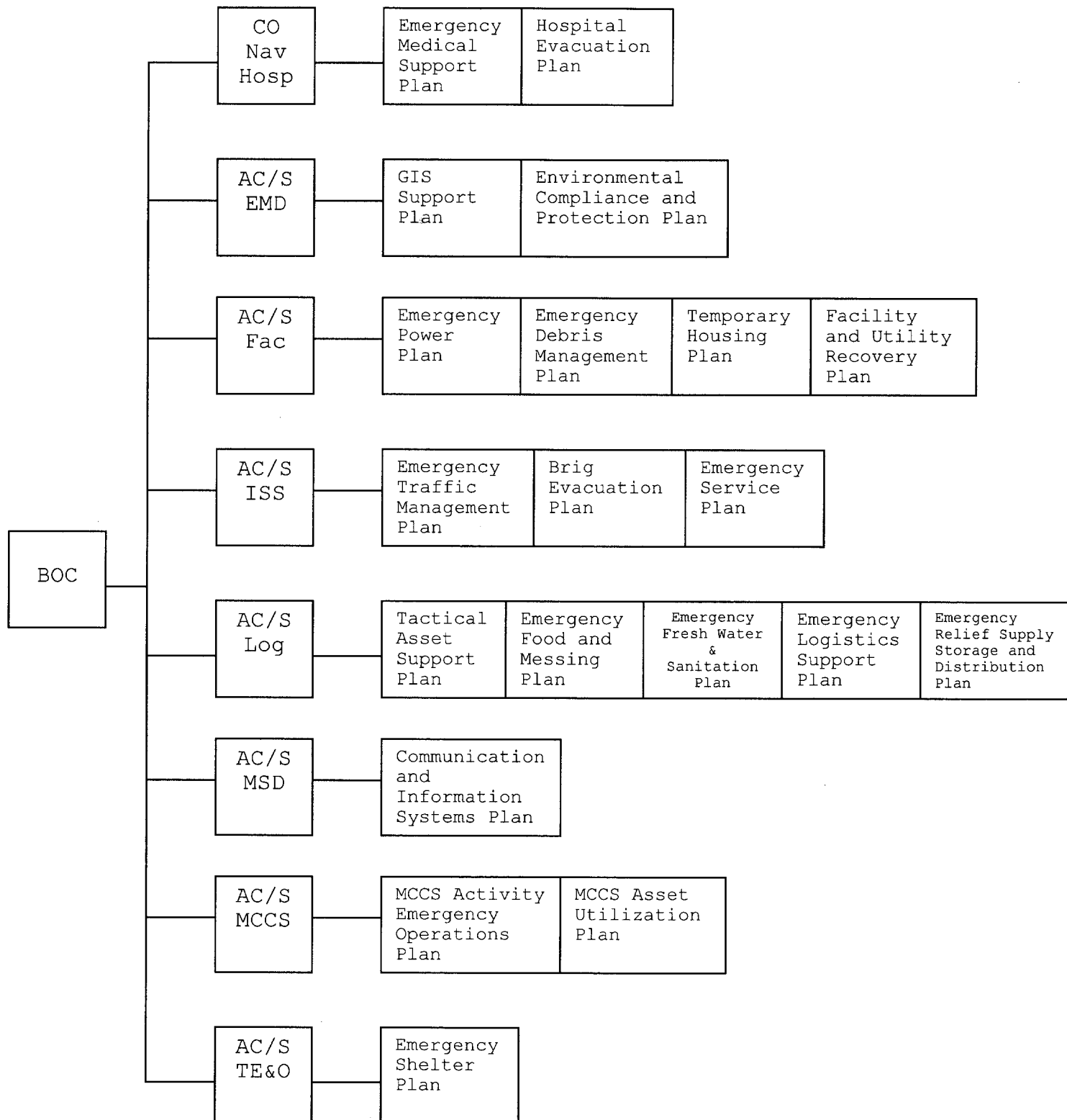
21	24.15	51	58.65	81	93.15	111	127.65	140	161
22	25.3	52	59.8	82	94.3	112	128.8	141	162.15
23	26.45	53	60.95	83	95.45	113	129.95	142	163.3
24	27.6	54	62.1	84	96.6	114	131.1	143	164.45
25	28.75	55	63.25	85	97.75	115	132.25	144	165.6
26	29.9	56	64.4	86	98.9	116	133.4	145	166.75
27	31.05	57	65.55	87	100.05	117	134.55	146	167.9
28	32.2	58	66.7	88	101.2	118	135.7	147	169.05
29	33.35	59	67.85	89	102.35	119	136.85	148	170.2
30	34.5	60	69	90	103.5	120	138	149	171.35

NOTE: MPH = Knots X 1.15

DESTRUCTIVE WEATHER MANUAL

APPENDIX L

SUPPLEMENTAL PLANS SOURCING



DESTRUCTIVE WEATHER MANUAL

APPENDIX M

REPORTS

1. General. The exchange of data and information is critical to the coordination of efforts in emergency management destructive weather operations. Continuous informal liaison and reporting of situations is essential to success.

2. Concept of Operations

a. Reporting requirements for non-Tropical Cyclone destructive weather (Thunderstorms, Dangerous Winds, Tornadoes, Winter Storms, and Flooding), unless directed otherwise, will involve the normal chain of command, emergency services, maintenance organizations, and procedures.

b. Reporting requirements for Tropical Cyclone destructive weather will be as follows:

REPORT TITLE	BY	TO	DUE	FORM
Ch. 1 Shelter Involvement Report (See Appendix F, Tab F)	Area Commanders	AC/S TE&O (or BOC) & AC/S LOG	1 June & Every 4 hours after Shelter Activation	Appendix F TAB F
After Action Report (See Appendix M, Tab A)	ALL Camp Lejeune Area Commands, key staff, and tenant units	AC/S TE&O	10 Days After Event	Appendix M-A-1, TAB A
DWC SITREP	BOC	MARFORLANT	AS REQ	Appendix M-A-2, Tab B

DESTRUCTIVE WEATHER MANUAL

TAB A

AFTER ACTION REPORT

1500

(Date)

From:

To: _____
Commanding General, Marine Corps Base, Camp Lejeune
(Attn: AC/S, TE&O)

Subj: AFTER ACTION REPORT

Ref: (a) MCO 5000.17

Encl: (1) MCLLS Report

1. In accordance with the reference, the enclosure is submitted
(MCLLS Format):

- a. Keywords:
- b. Title:
- c. Observation:
- d. Discussion:
- e. Lesson Learned:
- f. Recommended Action:
- g. Comments:
- h. Subject:
- i. Interoperability:

2. The POC is _____ at extension _____.

DESTRUCTIVE WEATHER MANUAL

MCB Camp Lejeune Destructive Weather

SITREP#___/DTG___L___

• Destructive Weather Condition #___ Effective___L

• Readiness:

• Shelter	Capacity	# of occupants
Camp Lejeune HS	300	_____
Tarawa Terrace HS	200	_____
Stone Bay Gym	150	_____
Camp Johnson Gym	150	_____
Goettge Memorial	500	_____
Stone St Youth Ctr	150	_____

Comments:

• Utilities:_____

• Facilities:_____

• Medical:_____

• Casualties: Deaths:___ Injuries:___

Comments:

• Damage:_____

• Property:_____

• Trafficability:_____

• Flooding:_____

• Communications:_____

• Issues/Concerns:

POC: MCB CLNC Base Operations Center: DSN 751-1714

DESTRUCTIVE WEATHER MANUAL

APPENDIX N

MILITARY SUPPORT TO CIVIL AUTHORITIES (MSCA)

1. Definition. **MSCA** refers to "...those activities and measures taken by DOD components to foster mutual assistance and support between DOD and any civil government agency in planning or preparedness for, or in the application of resources for response to, the consequences of civil emergencies or attacks, including national security emergencies" (a national security emergency is defined as any occurrence, including natural disaster, military attack, technological emergency, or other emergency, that seriously degrades or seriously threatens the national security of the US.)

2. Background. The "Robert T. Stafford Disaster Relief and Emergency Assistance Act," Public Law 93-288 as amended, provides an orderly and continuing means for Federal government assistance to State and local governments in carrying out their responsibilities to alleviate the suffering and damage resulting from disasters. The Federal Response Plan establishes the basis for provision of Federal assistance to a State and its affected local governments impacted by a catastrophic or significant disaster or emergency that results in a requirement for Federal response assistance. Reference (a) designates the Secretary of the Army as Executive Agent for MSCA and consolidates all policy and responsibilities into a single program (previously known as "military assistance to civil authorities" [MACA] , for peacetime disaster-related civil emergencies, and "military support to civil defense" [MSCD], for support to civil authorities during wartime) and provides broad policy guidance for providing MSCA during civil emergencies.

3. Key MSCA Players

a. Federal Emergency Management Agency (FEMA). FEMA is the designated Federal agency for coordinating, directing, and exercising civil emergency response planning. FEMA is also responsible for directing and coordinating the overall delivery of Federal assistance to civil authorities during a Presidential declared major disaster or emergency. FEMA supports local and State governments in their emergency response planning and recovery efforts. FEMA and DOD have an established protocol through which FEMA requests DOD assistance in support of a

DESTRUCTIVE WEATHER MANUAL

Presidential disaster/emergency declaration. Upon Presidential declaration of a major disaster/emergency, FEMA appoints a Federal Coordinating Officer (FCO) from the appropriate FEMA region to direct and coordinate overall Federal response to the disaster/emergency. The FCO works in concert with the State Coordinating Officer (SCO), appointed by the affected State Governor, and if required the Defense Coordinating Officer (DCO), the on-scene DOD representative, to ensure a well-coordinated disaster emergency relief effort.

b. Secretary of the Army (SECAR). SECAR is the DOD executive agent for MSCA. In that capacity, SECAR acts for SECDEF in developing MSCA planning guidance, plans, and procedures. As the DOD Executive Agent, SECAR has SECDEF authority to task DOD Components to plan for and commit DOD resources in response to requests from civil authorities.

c. Director of Military Support (DOMS). DOMS is the SECAR MSCA action agent, and communicates and coordinates SECAR Executive Agent MSCA policy guidance and execution directions (SECAR has delegated MSCA responsibility to the Director of Operations, Readiness and Mobilization, Office of the Deputy Chief of Staff for Operations and Plans, Headquarters, Department of the Army.)

d. Planning Agents. CINC, Joint Forces Command (JFCOM) and CINC, Pacific Command (USAPAC) are the designated DOD MSCA planning agents. JFCOM has been delegated responsibility for coordinating and directing the employment of DOD forces and resources engaged in MSCA operations within CONUS, Puerto Rico, and the US Virgin Islands (USAPAC has been delegated similar responsibilities for Alaska, Hawaii, and the US Pacific Territories.)

e. Commander, Forces Command ~~(COMFORSCOM)~~ ^{COMFORSCOM}. JFCOM has assigned COMFORSCOM lead operational authority (LOA) for MSCA planning and coordination. FORSCOM has in turn delegated this authority to the two Continental US Armies for their assigned areas. ch. 1

f. Continental US Armies (CONUSA). CONUSA commanders coordinate and direct the employment of DOD forces and resources within their assigned areas. The appropriate CONUSA commander appoints a Defense Coordinating Officer (DCO) to coordinate all MSCA operations in support of a Presidential disaster/emergency declaration. The DCO works in concert with the FCO to coordinate requirements for MSCA through the proper command

DESTRUCTIVE WEATHER MANUAL

channels to ensure timely and appropriate response while avoiding duplication of effort.

4. Execution

a. Immediate Response. Base commanders are authorized to respond under their own authority to requests from civil authorities for assistance under imminently serious conditions (situations where immediate action is required to save lives, prevent human suffering, or mitigate great property damage). This authority also applies to situations requiring immediate response where local or State resources are available but, due to time/distance constraints, cannot be successfully employed. It should be mutually understood that any assistance rendered is provided on a cost-reimbursable basis (costs incurred above normal operating expenses); however, immediate response assistance should not be delayed nor denied based on a lack of reimbursement commitment from the requesting civil agency (the base commander will subsequently seek reimbursement for immediate response MSCA according to the provisions of a mutual assistance agreement between the base and the local community.)

b. Presidential Declaration of a Major Disaster/Emergency

(1) If a disaster or emergency within a State results in widespread death, injury, human suffering or property damage, the State governor may petition the President to declare the affected area a "Federal Disaster Area." Once declared such, FEMA will designate a FCO to direct and coordinate all Federal assistance. If it appears DOD participation will be required within CONUS, the appropriate CONUSA commander will designate a DCO to assist the FCO. The FCO can request any Federal department or Agency provide assistance to local and State governments during a Presidential disaster declaration. The FCO validates all requests from the State, determines which Federal department/agency can best respond, and tasks the appropriate department/agency through established channels. DOD taskings are referred to the DCO who validates and assists in obtaining the required DOD resources.

(2) Subsequent to a Presidential declaration of disaster/emergency commanders may continue to directly receive requests for assistance from civil authorities. Unless the direct request for assistance from the civil authority meets the criteria for immediate response, the commander should advise the requestor to forward the request through local/State emergency management channels to the SCO.

DESTRUCTIVE WEATHER MANUAL

(3) "Ten Day Rule." Commanders may be required to respond at the direction of the President to perform emergency work on public or private lands that is essential for the preservation of life and property (broader than immediate response). These operations may occur either in lieu of or prior to a Presidential declaration of disaster/emergency. Operations of this type will follow a request by a State governor under §403(c) of the Stafford Act, PL 93-288, 42 U.S.C. 5121, et seq., as amended. DOD involvement under this provision may be carried out for a period not to exceed 10 days from the date of notification, or 10 days prior to a formal Presidential declaration of disaster/emergency.

01-2 ~~COMMAFORLANT/COMMAFORBASESLANT~~ Taskings for Marine Corps assets will be routed via COMMAFORLANT/COMMAFORBASESLANT. All requests for MSCA in the greater Camp Lejeune complex will be routed through the BOC (until the BOC is stood down, at which time alternate MSCA request routing will be published.) TAB A depicts generic MSCA command relationships (each instance of MSCA is unique.) TAB A also lists the North Carolina DCO / Defense Coordination Element (DCE) Emergency Preparedness Liaison Office (EPLO) planners. While MSCA operations are ongoing (particularly involving Marine Corps assets) there will be a twice daily (0900 and 2100) MSCA coordination conference call, hosted by the NC DCO. The Marine Corps representatives for said twice daily MSCA coordination conference call are the AC/S, TE&O and the II MEF DWOC Senior Watch Officer.

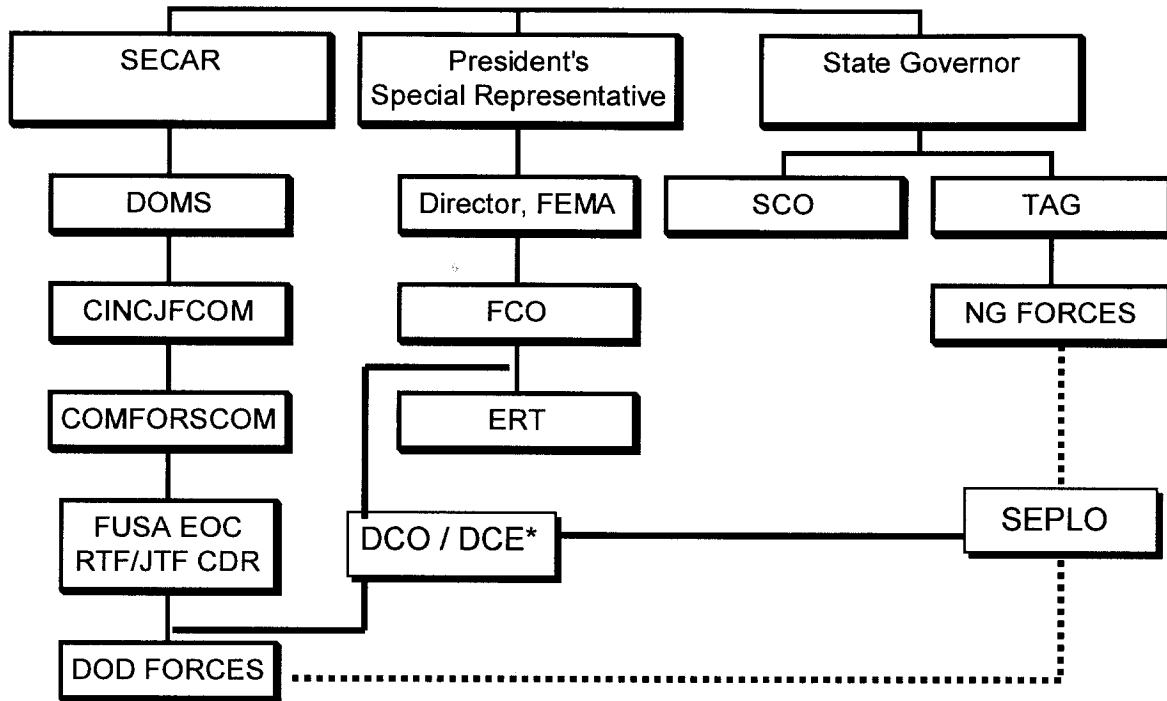
d. A FEMA disaster identification number will accompany all requests for assistance (RFA). The RFA number must be cited on all reports for tracking visibility and on all billings for reimbursement purposes. Units will comply with RFAs within their unit's capability, provided the requested assistance does not interfere with the accomplishment of the unit's primary military mission.

e. The normal method for obtaining DOD assistance is for the local civil authority to forward a RFA through the State emergency management chain. If the State has exhausted all applicable response capabilities, the SCO will work with the FCO to ensure a Federal response. DOD resources will be tasked to assist provided they are determined to be the appropriate Federal department for the mission.

DESTRUCTIVE WEATHER MANUAL

TAB A

MSCA COMMAND RELATIONSHIPS



*** NC DEFENSE COORDINATING OFFICER / DEFENSE COORDINATION ELEMENT**

CDR, 4thBDE, 78thDIV (TS), Ft Bragg(cml) 910-396-3151

- MSCA Plans Specialist(cml) 910-396-4019
- Air Force Emergency Preparedness LnO(cml) 910-396-4019
- Army Emergency Preparedness LnO(cml) 910-396-4019
- Navy Emergency Preparedness LnO(cml) 910-396-4019

DESTRUCTIVE WEATHER MANUAL

APPENDIX O

GLOSSARY OF ACRONYMS

A

Assault Amphibian Vehicle.AAV
Assistant Chief of StaffAC/S
Air Combat CommandACC
American National Red Cross.ANRC
Area of ResponsibilityAOR
Assistant Secretary of Defense, Health AffairsASDHA
Above Sea Level.ASL
Ammunition Supply Point.ASP
Automated Digital Network.AUTODIN

B

Base Maintenance OfficerBMO
Base Support Installation.BSI
Brunswick Steam Electric PlantBSEP

C

Command and Control.C2
Crisis Action CenterCAC
Camp LejeuneCamLej
Civil Air PatrolCAP
Continental US Airborne ReconnaissanceCARDA
Casualty Coordination CenterCCC
Civil Defense.CD
Command Duty OfficerCDO
Comptroller of the Department of DefenseC, DoD
Catastrophic Disaster Response GroupCDRG
Communications Electronics OfficerCEO
Comprehensive Environmental Response,
Compensation, and Liability Act.CERCLA
Code of Federal Regulations.CFR
Commander-in-ChiefCINC
Commander, Marine Corps Air Bases EastCOMCABEAST
Commander, U.S. Marine Corps
Forces, Atlantic.COMMARFORLANT

DESTRUCTIVE WEATHER MANUAL

Continental United States. CONUS
Consolidated Public Affairs Officer. CPAO
Command Post Exercise. CPX
Chemical Stockpile Disposal Program. CSDP
Chemical Stockpile Emergency
Preparedness Program CSEPP

D

Defense Acquisition Supplement DARS
Disaster Assessment Survey Team. DAST
Dental Corps DC
Defense Coordinating Element DCE
Defense Coordinating Officer DCO
Damage Control and Recovery Center DCRC
Deputy Chief of Staff, Operations. DCSOPS
Director, Defense Finance and
Accounting System. D/DFAS
Defense Commissary Agency. DeCA
Domestic Emergency Planning System DEPS
Defense Emergency Response Fund. DERF
Defense Finance and Accounting Service DFAS
Disaster Field Office. DFO
Department of Health and Human Services. DHHS
Defense Logistics Agency DLA
Disaster Medical Assistance Team DMAT
Department of Commerce DOC
Department of Defense. DoD
Department of Energy DOE
Department of Education. DOEd
Department of the Interior DOI
Department of Justice. DOJ
Department of Labor. DOL
Director of Military Support DOMS
Department of State. DOS
Department of Transportation DOT
Direct Support Stock Control DSSC

E

Emergency Management Coordinator EMC
Environmental Management Department. EMD
Emergency Management Institute EMI

DESTRUCTIVE WEATHER MANUAL

Emergency Medical Technician	EMT
Executive Order	E.O.
Explosive Ordnance Disposal	EOD
Emergency Operations Center	EOC
Environmental Protection Agency	EPA
Environmental Protection Agency	
Environment Response Team	EPAERT
Emergency Preparedness Liaison Officer	EPLO
Emergency Response Team	ERT
Emergency Response Team Advance	ERT-A
Emergency Support Function	ESF
Emergency Support Team	EST

F

Federal Aviation Administration	FAA
Federal Coordinating Center	FCC
Federal Coordinating Officer	FCO
Federal Emergency Management Agency	FEMA
Fire Order Number	FON
Forces Command	FORSCOM
Federal On Scene Coordinator	FOSC
Federal Radiological Emergency Response Plan	FRERP
Federal Response Plan	FRP

G

Geographic Information System	GIS
General Services Administration	GSA
Greater Sandy Run Area	GRSA

H

Hazardous material	Hazmat
Hazardous waste	Hazwaste
High Frequency	HF
Hospital Corpsman	HM
Hazardous Material Safety Coordinator	HMSC
Hazardous Material Safety Officer	HMSO

DESTRUCTIVE WEATHER MANUAL

I

Incident Commander. IC
Incident Command System ICS
Intensive Care Unit ICU
Improvised Explosive Device IED
Installations, Logistics and Environments IL&E
Interservice Agreement. ISA
Installation Security and Safety. ISS

J

K

L

Light Armored Vehicle LAV
Logistics and Movement Control Center LMCC

M

Medical Corps MC
Marine Corps Engineer School. MCES
Marine Corps Service Support Schools. MCSSS
miles per hour. MPH
Medical Service Corps MSC
Military Support to Civil Authorities MSCA
Management Support Department MSD
Main Supply Route MSR
Marine Wing Support Squadron. MWSS

N

Naval Hospital. NAVHOSP
North Carolina Emergency Management Department. NC EMD
Naval Hospital, Camp Lejeune, North
Carolina, Instruction NHCLNCINST
National Oceanic and Atmospheric Administration NOAA
National Weather Service. NWS

O

On-scene Command. OSC

DESTRUCTIVE WEATHER MANUAL

P

Public Address. PA
Parts per million PPM
Petroleum, Oil, and Lubricants. POL

Q

R

Regional Automated Service Center RASC
Responsible Officer RO
Reserve Support Unit. RSU

S

Serious Incident Report SIR
School of Infantry. SOI
Standing Operating Procedures SOP

T

Tent City (Camp Geiger) TC
Training, Education, and Operations TE&O
Tarawa Terrace. TT

U

V

W

X

Y

Z

DESTRUCTIVE WEATHER MANUAL

APPENDIX P

GLOSSARY OF TERMS

A

ACCREDITATION. To confirm credentials; to certify the acquisition or meeting of certain standards. For the purposes of this Manual used in regard to the authenticity and authorization of media personnel to cover and report Installation events.

AREA COMMANDER. For the purposes of this Manual, those persons identified by BO 11100.5N.

B

C

CAMP LEJEUNE AREA. For the purposes of this Manual, the geographic area, physical plant, property, equipment, material, and personnel that comprise MCB, Camp Lejeune and MCAS, New River.

COMMAND AUTHORITY. The authority that an individual lawfully exercises over subordinate individuals and units by virtue of rank or assignment.

COMMAND RELATIONSHIP. The manner in which commanders, key staff, and organizational leaders interact with one another relative to rank and chain-of-command.

COMMAND RESPONSIBILITY. Those matters and actions, both material and administrative (to include facilities, buildings, equipment, stores, and personnel), for which a commander is accountable and liable.

CONTINGENCY. An emergency involving military forces caused by natural disaster, terrorists, subversives, or by required military operations. Due to the uncertainty of the situation, contingencies require plans, rapid response, and special procedures to ensure the safety and readiness of personnel, installations, and equipment.

CRISIS. A crucial situation. A destabilizing occurrence of events, as relative to a normal state of affairs.

DESTRUCTIVE WEATHER MANUAL

D

DESTRUCTIVE WEATHER. Any weather condition that has the potential to damage or destroy Installation facilities, buildings, equipment, and/or material, or cause harm or injury, in any regard, to Installation personnel or dependents, locally or in the surrounding community.

DESTRUCTIVE WEATHER CONDITION. A phase of preparation, response, or recovery of facilities, buildings, equipment, material, and personnel as is relative to a set of progressive steps taken to position the Camp Lejeune Complex for an impending, occurring, or passing hurricane.

DISASTER. For the purposes of this Manual, the occurrence of any event that is beyond the initial and intermediate response and recovery capability of those units and organizations that are normally tasked to respond to and recover from such an event. As such, a disaster requires the coordinated effort of multiple units and organizations, some of which are not normally tasked to such response/recovery efforts.

E

EMERGENCY. For the purposes of this Manual, the occurrence of any event that requires the response of those regularly tasked and trained Installation Security and Safety units, as well as any event that requires the coordinated efforts of multiple Installation units and organizations, in addition to ISS units.

EMERGENCY MANAGEMENT. Those actions taken by commanders and staff to preclude, contain, minimize, and recover from any emergency situation. This includes education, training, preparation, command and control, and use of resources.

EMERGENCY SHELTER. A predesignated building used to provide temporary shelter for persons who have been evacuated from higher risk areas and buildings and/or who have otherwise become displaced as a result of a local disaster or emergency situation and cannot obtain adequate shelter elsewhere.

DESTRUCTIVE WEATHER MANUAL

EXTERNAL ACTIVITY. Any activity (unit, organization, etc.) other than one aboard, assigned to, and/or affiliated with the Camp Lejeune Complex.

F

FACILITIES. For the purposes of this Manual, (when in all lower case letters) those physical plant items that do not necessarily include buildings or equipment.

G

GEOGRAPHIC INFORMATION SYSTEM (GIS). A computer based system designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information. The GIS operates over a distributed network of computer hardware and software, and contains an evolving database of information unique to the geography, physical plant, and demographics of the Camp Lejeune Complex. This database is referred to as the Integrated Geographic Information Repository.

H

I

INCIDENT. An occurrence or event, either man-made or natural, that interrupts normal activity or precipitates a crisis, thereby requiring action by emergency personnel to prevent or minimize loss of life or damage to property and/or natural resources.

INCIDENT COMMAND SYSTEM. The combination of facilities, equipment, personnel, procedures, and communications operating with a common organizational structure with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident. The incident command system has five functional areas involving command, operations, planning, logistics and finance.

INSTALLATION. For the purposes of this Manual, the geographic area, physical plant, property, equipment, material, and personnel that comprise MCB, Camp Lejeune and MCAS, New River.

INTERNAL ACTIVITY. Any activity (unit, organization, etc.) aboard, assigned to, and/or affiliated with the Camp Lejeune Complex.

DESTRUCTIVE WEATHER MANUAL

INTERSERVICE SUPPORT AGREEMENT. An agreement to provide logistics and/or administrative support in services or material between commands, military services, or other governmental department or agency.

J

K

KEY STAFF. For the purposes of this Manual, those individuals holding the billet titles listed in paragraph 1003 on page 1-5.

L

M

MAJOR SUBORDINATE COMMANDERS. For the purposes of this Manual, those individuals holding the billet titles listed in paragraph 1003 on page 1-5.

MITIGATION. An overall state of readiness to include any passive measure, project, or action designed to reduce, if not eliminate, the risk of damage, hardship, loss, or suffering to Camp Lejeune and New River Marines, Sailors, civilian personnel, and dependents resulting from future natural or man-made forces.

N

O

ON-SCENE COMMANDER (OSC). For the purposes of this Manual, the most senior individual of those personnel and units responding to any incident, emergency, crisis, or disaster aboard the Installation.

P

PREPARATION. Those actions taken in advance of a particular event with the purpose of readying for that event.

PHYSICAL PLANT. The buildings, equipment, material, and fixtures of the Installation.

DESTRUCTIVE WEATHER MANUAL

R

READINESS. The state of being prepared for a particular occasion or event.

RECOVERY. Those actions taken to reestablish functional and operational capability.

RESPONSE. Those actions taken during or immediately after the occurrence of an event or incident.

S

T

TEMPORARY HOUSING. Shelter that is available on a short term basis that may include permanent structures, tents, etc.

TEMPORARY SANITATION. Sanitation facilities (port-a-johns, field showers, etc.) that can be established, maintained, and dismantled expeditiously.

TENANT COMMANDER. For the purposes of this Manual, those individuals holding the billet titles listed in paragraph 1003, page 1-5.

U

V

W

X

Y

Z